

# REMARKS

Reconsideration is respectfully requested. Claims 1-4 and 7-15 are present in the application. Claim 1 is amended. Claims 5-6 were canceled previously. No other claims are amended herein.

Claim 1 is amended to withdraw the previous amendment of the water content ratio, which the Examiner objected to.

Claim 1 is also amended to recite a ratio of the release-controlling material to the dry weight of the ammonium phosphate slurry. Support for the language of this amendment is found in applicant's specification as filed, page 3, line 1.

It is noted with thanks that the Advisory action indicated that the amendments would overcome paragraph 2 of the final action.

With regard to the other rejections, page 3, column 3, line 9 and following of Detroit (US patent 4,846,871) discloses that with loading over 0.7% hardness decreases presumably through a diluent effect, .... Page 2, column 2, line 31 and following further discloses that 0.7% is believed to be the practical upper limit since above this dosage, hardness once again decreases. . . That is, a skilled person in this art would not mix an amount over 0.7 wt% of lignosulfonate with the fertilizer after reviewing Detroit's patent. The correlation between hardness and controlled release is not the point of the Applicant's invention.

Applicant respectfully cannot agree with the Examiner's allegation that applicant's position that the fertilizer and lignosulfonate are not mixed before granulation in Detroit. Line 6 and following on Page 9 of the Applicant's argument submitted in response to the final action states that the lignosulfonate is evenly mixed with the fertilizer solution prior to condensing the fertilizer mixture. Applicant never argued that "the fertilizer and lignosulfonate are not mixed before granulation in Detroit" as stated in the Office Action. Thus, the Examiner's allegation respectfully has no basis and should be corrected. Page 10, line 6 and following of the Applicant's argument states that the Applicant's invention is clearly different in timing of adding and mixing lignosulfonate and the fertilizer from this cited US patent (the Applicant's invention is mixed before the condensing step, however, this patent is mixed after the condensing step). The difference of adding and mixing lignosulfonate and the fertilizer between the Applicant's invention and the cited patent makes the resultant fertilizer particulate have totally different properties. The fertilizer particulate produced according to the Applicant's invention has a controlled release property, but the fertilizer particulate produced according to Detroit patent has anti-caking and anti-dusting properties. Thus, the timing, before or after condensing, of adding and mixing the lignosulfonate and fertilizer is the Applicant's key point stressed in the previous

response. Therefore, the timing of adding and mixing the lignosulfonate and the fertilizer between the Applicant's invention and the cited Detroit patent is totally different, that is, the lignosulfonate is mixed with the fertilizer before the condensing step according to the Applicant's invention, and the lignosulfonate is mixed the fertilizer after the condensing step according to the Detroit US patent. Further to referring to the Applicant's response to final action on page 7, the flow chart clearly shows that the release controlling material (lignosulfonate) is added before the condensing step, but the anti-dusting material (lignosulfonate) is added between the condensing and granulating steps, and after the granulating step. Therefore, the Examiner's interpretation that applicant's position that the fertilizer and lignosulfonate are not mixed before granulation in Detroit is an apparent misunderstanding.

As stressed on page 6 of the Applicant's response to the final action, besides the operation sequence (i.e. 1. adding release controlling materials, 2. Mixing evenly, 3. Condensing the mixture, and 4. Granulating), the characteristics of the Applicant's method also reside at the amount of water content after condensing, and the ratio of the release controlling materials to the dry weight of the ammonium phosphate slurry. The condensing step condenses the mixture until the water content of the mixture reaches 25 35% (w/w, based on the dry weight of the ammonium phosphate slurry), and the ratio of the

release-controlling materials to the dry weight of the ammonium phosphate slurry is 3-35%.

Rohwer (US published patent application 2004-0099026) teaches a "Manufacturing method for zeolite containing fertilizer." Paragraph 21 of this publication discloses that an application-ready fertilizer may be produced with slight adjustments to the above process. The weight ratio of the ammonium phosphate solution to the zeolite is about 10%. Claim 8 of this publication also indicates that wherein a commercial fertilizer containing, for example, phosphorous cations, may be added to the mixture prior to processing in an amount generally about 10 percent, by weight, of the zeolite component. However, according to the Applicant's invention, the ratio of the release controlling materials (zeolite in the cited US published application) to the fertilizer is 3-35%, that is 97-65% of ammonium phosphate is used in the Applicant's invention. This amount, 97-65% is much higher than the amount (only 10%) that is used in the cited publication document.

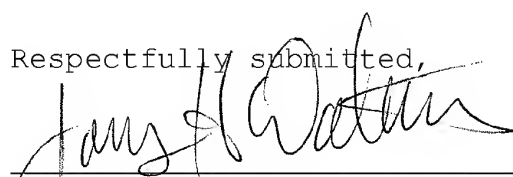
Additionally, the zeolite containing fertilizer according to the cited US published application is in a liquid form, not a particulate as disclosed in the Applicant's invention. Paragraph 0009 of the published application discloses that the zeolite component and the calcium carbonate component are mixed in roughly 2:1 weight ratio (zeolite to calcium carbonate). Paragraph 10 of the published application further discloses that

the precursor particles (mixed zeolite and calcium carbonate) are applied to the field, that is zeolite must be mixed with calcium carbonate first, and applied to the field as precursor particles. This concept and application disclosed in the cited published application is clearly different from the Applicant's claimed invention.

It is therefore respectfully submitted that claims 1-4 and 7-15 are not taught or suggested by the documents relied on in the final action, whether considered alone or when combined.

In light of the above noted amendments and remarks, this application is believed in condition for allowance and notice thereof is respectfully solicited. The Examiner is asked to contact applicant's attorney at 503-224-0115 if there are any questions.

Respectfully submitted,

  
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